## CLAIMS

What is claimed is:

1. An apparatus comprising:

a medical device adapted to be inserted in an anatomy, the medical device comprising a plurality of target markers,

wherein a magnetic resonance imaging (MRI) system will one of not detect and disregard the medical device as noise without information obtained on the plurality of target markers prior to insertion of the medical device into the anatomy.

2. The apparatus of claim 1, wherein the plurality of target markers comprise one of ferromagnetic and paramagnetic material.

3. The apparatus of claim 2, wherein the plurality of target markers are disregarded by MRI systems as noise operating between 0.2 and 5.0 Tesla.

4. The apparatus of claim 1, the medical device is one of a fluid delivering catheter, a stent delivering device, a photographic device and a balloon catheter.

5. The apparatus of claim 4, wherein the medical device comprises a polymer material.

6. The apparatus of claim 4, wherein the medical device is expandable.

7. The apparatus of claim 1, wherein the orientation and precise location of the medical device in relation to the anatomy is determinable based on the location of the plurality of target markers in relation to the medical device and each of the plurality of target markers.

8. A system comprising:

a magnetic resonance imaging (MRI) processor, the processor including a low-level signal detection process stored in a memory,

a MRI scanner coupled to the processor,

a control unit coupled to the processor,

a display coupled to the processor, and

a medical device to insert in an anatomy, the medical device having a plurality of target markers,

wherein the medical device is one of not detectable and disregardable as noise for MRI systems without the low-level signal detection process.

9. The system of claim 8, further comprising a pre-scanning device coupled to the processor.

10. The system of claim 9, wherein the pre-scanner transmits one of a plurality of geometric data, a plurality of image data, and a plurality of geometric data and a plurality of image data of a medical device and the plurality of target markers to the processor.

11. The system of claim 8, wherein the plurality of target markers comprise one of ferromagnetic and paramagnetic material.

12. The system of claim 11, wherein the plurality of target markers are disregarded by MRI systems operating between 0.2 and 5.0 Tesla.

13. The system of claim 8, the medical device is one of a fluid delivering catheter, a stent delivering device, a photographic device and a balloon catheter.

14. The system of claim 13, wherein the medical device comprises a polymer material.

15. The system of claim 14, wherein the medical device is expandable.

16. The system of claim 8, wherein an orientation and a precise location of the medical device in relation to the anatomy is determinable based on the location of the plurality of target markers.

17. The system of claim 8, wherein an image of the medical device is superimposed over its precise location within the anatomy, the superimposed image having the precise orientation that the medical device has within the anatomy.

18. The system of claim 8, wherein a plurality of pixels of the medical device replace a plurality of pixels of an anatomy at the precise location that the medical device is located at within the anatomy, the plurality of pixels of the medical device having the precise orientation that the medical device has within the anatomy.

19. The system of claim 8, wherein the memory having stored one of a plurality of geometric data, a plurality of image data, and a plurality of

geometric data and a plurality of image data of a medical device.

20. The system of claim 8, wherein the low-level signal detection process adjusts a signal detection threshold to detect a low-level signal produced from the target markers.

21. The system of claim 20, wherein a non-adjusted signal threshold will one of disregard and not detect the low-level signal produced from the target markers.

22. The system of claim 8, wherein the low-level signal detection process determines to not discard low-level signals returned from the target markers upon a match from a comparison of known geometric data from the target markers with the returned low-level signals.

23. A method comprising:

inserting a medical device into an anatomy, the medical device having a plurality of target markers,

scanning a magnetic resonance image (MRI) of the anatomy,

processing the scanned image by a MRI processor coupled to a memory,

determining a location and orientation of the medical device in relation to the anatomy based on the plurality of target markers, and

displaying a precise image of the medical device within the anatomy, wherein the medical device is disregardable as noise for MRI systems.

24. The method of claim 23, further comprising:

pre-scanning the medical device before inserting the medical device in an anatomy, and

transmitting one of a plurality of geometric data, a plurality of image data, and a plurality of geometric data and a plurality of image data of a

medical device and the plurality of target markers to the MRI processor.

25. The method of claim 23, wherein the plurality of target markers comprise one of ferromagnetic and paramagnetic material.

26. The method of claim 25, wherein the plurality of target markers are one of not detectable and disregarded by MRI systems operating between 0.2 and 5.0 Tesla.

27. The method of claim 23, wherein the medical device is one of a fluid delivering catheter, a stent delivering device, a photographic device and a balloon catheter.

28. The method of claim 27, wherein the medical device comprises a polymer material.

29. The method of claim 27, wherein the medical device is expandable.

30. The method of claim 23, further including superimposing an image of the medical device over the anatomy, wherein the superimposed image of the medical device is located at its precise location within the anatomy, the superimposed image having the precise orientation that the medical device has within the anatomy.

31. The method of claim 23, further including replacing a plurality of pixels of an anatomy with a plurality of pixels of the medical device at the precise location that the medical device is located at within the anatomy, the plurality

of pixels of the medical device having the precise orientation that the medical device has within the anatomy.

32. The method of claim 23, wherein the memory having stored one of a plurality of geometric data, a plurality of image data, and a plurality of geometric data and a plurality of image data of a medical device and the plurality of target markers.

33. The method of claim 23, processing the scanned image further includes:

adjusting a signal detection threshold to detect a low-level signal produced from the plurality of target markers, wherein if the signal detection threshold is not adjusted the low-level signal produced from the plurality of target markers will t be discarded.

34. An apparatus comprising a machine-readable medium containing instructions which, when executed by a machine, cause the machine to perform operations comprising:

scanning a magnetic resonance image (MRI) of an anatomy,

processing the scanned image by a MRI processor coupled to a memory, the MRI processor having a low-level signal detection process,

determining a location and orientation of the medical device in relation to the anatomy based on a plurality of target markers, and

displaying a precise image of the medical device within the anatomy, wherein the medical device is one of not detectable and disregardable as noise for MRI systems.

35. The apparatus of claim 34, further containing instructions which, when executed by the machine, cause the machine to perform operations including:

pre-scanning the medical device before the medical device is inserted in an anatomy,

transmitting one of a plurality of geometric data, a plurality of image data, and a plurality of geometric data and a plurality of image data of a

medical device and the plurality of target markers to the MRI processor, and

withdrawing a medical device from an anatomy at a dynamically adjusted pace.

36. The apparatus of claim 34, wherein the plurality of target markers comprise one of ferromagnetic and paramagnetic material.

37. The apparatus of claim 36, wherein the plurality of target markers are one of not detectable and disregarded by MRI systems operating between 0.2 and 5.0 Tesla.

38. The apparatus of claim 34, wherein the medical device is one of a fluid delivering catheter, a stent delivering device, a photographic device and a balloon catheter.

39. The apparatus of claim 38, wherein the medical device comprises a polymer material.

40. The apparatus of claim 38, wherein the medical device is expandable.

41. The apparatus of claim 34, further containing instructions which, when executed by the machine, cause the machine to perform operations including:

superimposing an image of the medical device over the anatomy, wherein the superimposed image of the medical device is located at its precise location within the anatomy, the superimposed image having the precise orientation that the medical device has within the anatomy.

42. The apparatus of claim 34, further containing instructions which, when executed by the machine, cause the machine to perform operations including:

replacing a plurality of pixels of an anatomy with a plurality of pixels of the medical device at the precise location that the medical device is located at within the anatomy, the plurality of pixels of the medical device having the precise orientation that the medical device has within the anatomy.

43. The apparatus of claim 34, wherein the memory having stored one of a plurality of geometric data, a plurality of image data, and a plurality of geometric data and a plurality of image data of a medical device.

44. The apparatus of claim 34, wherein the low-level signal detection process adjusts a signal detection threshold to detect a low-level signal produced from the target markers.

45. An apparatus comprising a machine-readable medium containing instructions which, when executed by a machine, cause the machine to perform operations comprising:

scanning a magnetic resonance image (MRI) of an anatomy,

processing the scanned image by a MRI processor coupled to a memory, the MRI processor having a low-level signal detection process,

determining a location and orientation of the medical device in relation to the anatomy based on detection of a plurality of target markers in relation to the medical device and each of the plurality of target markers, wherein the plurality of target markers and geometric data of the medical device is determined before the medical device is inserted into the anatomy, and

displaying a precise image of the medical device within the anatomy, wherein the medical device is one of not detectable and disregardable as noise for MRI systems without the low-level signal detection process.

46. The apparatus of claim 45, wherein the low-level signal detection process adjusts a signal detection threshold to detect a low-level signal produced from the target markers.

47. A system comprising:

a magnetic resonance imaging (MRI) processor, the processor including a low-level signal detection process stored in a memory,

a MRI scanner coupled to the processor,

a control unit coupled to the processor,

a display coupled to the processor, and

a medical device to insert in an anatomy, the medical device having a plurality of target markers,

wherein the medical device is disregardable as noise for MRI systems without the low-level signal detection process, and

prior to insertion of the medical device into the anatomy, location and orientation of the medical device in relation to the anatomy is determined by the processor based on detection of the plurality of target markers in relation to the geometric information of the medical device and each of the plurality of target markers, wherein the geometric information of the medical device and the plurality of the target markers is obtained before the medical device is inserted into the anatomy.

48. The system of claim 47, wherein the low-level signal detection process adjusts a signal detection threshold to detect a low-level signal produced from the target markers.

49. The system of claim 48, wherein the information of the medical device before insertion into the anatomy and position the detected plurality of target markers are used to display a properly oriented constructed image of the medical device in anatomy.